



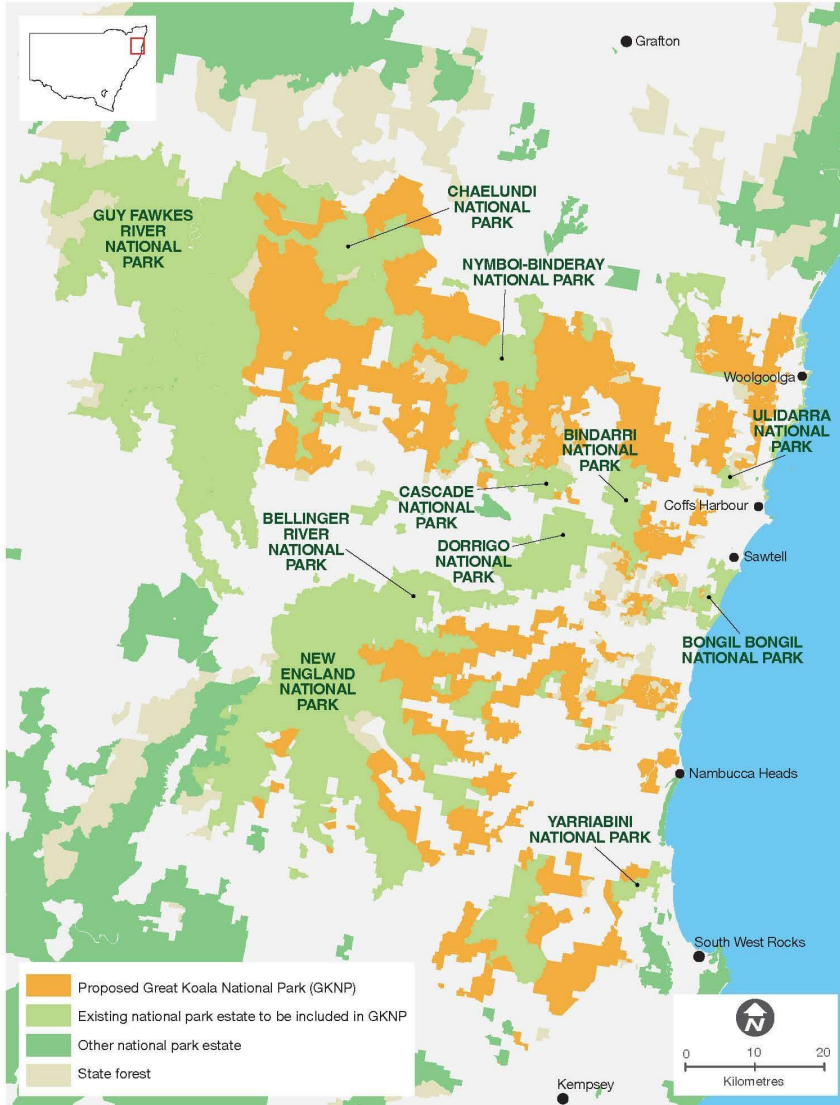
**Providing real landscape-
scale recovery options for an
iconic landscape species.**

Steve Phillips

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Proposed Great Koala National Park



There was some good news for koalas last week with confirmation that the Great Koala National Park (GKNP) is going to become a reality.

The GKNP combines 176,000 ha of existing State Forest areas with the existing National Park estate to create a network of protected areas covering 475,000 ha.

Media reports offered responses to the announcement, amongst which were industry concerns about loss of resource and associated jobs.

ABC North Coast Media release 9th September: “*Timber industry counts cost of ban from 176,000 hectares of Great Koala National Park*”



Image source: ABC news

“The timber industry is shocked by the moratorium on logging...”

“... the move (will) would significantly impact hardwood supply on the NSW north coast.”

... but note the small diameters of the ‘sawlogs’ in this picture

Not just a coincidence ... more small diameter 'sawlogs' *in situ*.....

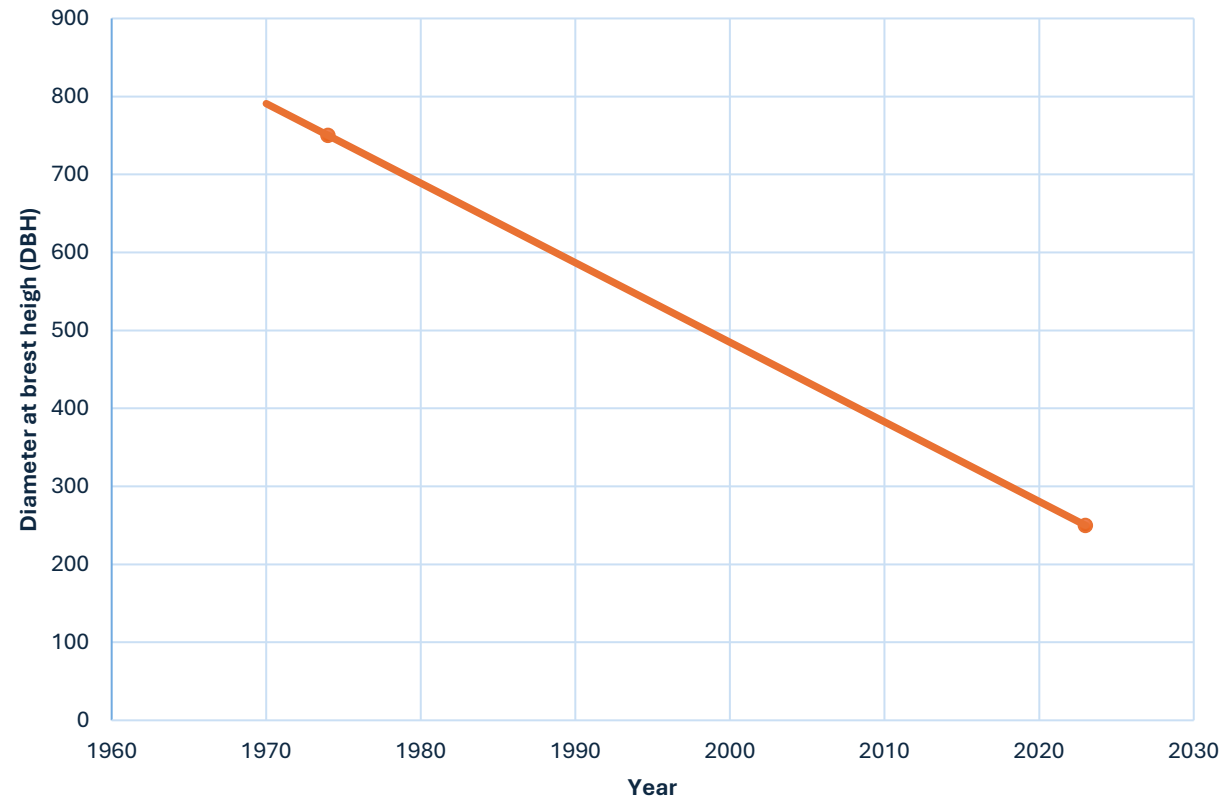


Image source: ABC news

So.. what has been happening in our State forests over time?

In the 1970s, the minimum Diameter at Breast Height (DBH) for a commercial sawlog in NSW was 70 – 80 cm.

In 2024/25, the minimum DBH for a commercial sawlog in NSW is 20 – 30 cm.



The logging of State-owned native forests has been demonstrably unsustainable, both ecologically and economically, for decades.

How have koala populations living on forestry estate responded to this circumstance?

These are the results from a survey of 354 unbiased (grid-based) field sites (10,620 trees) on the mid-north coast of NSW.

Survey revealed that koala occupancy rates and koala activity in State Forests were significantly lower when compared to other land tenures.

Land Tenure	n	n ^k	% Active Sites	Mean Activity
National Parks	50	16	32.00	23.00
Other lands	232	58	25.00	12.31
State Forests	72	10	13.88	5.33

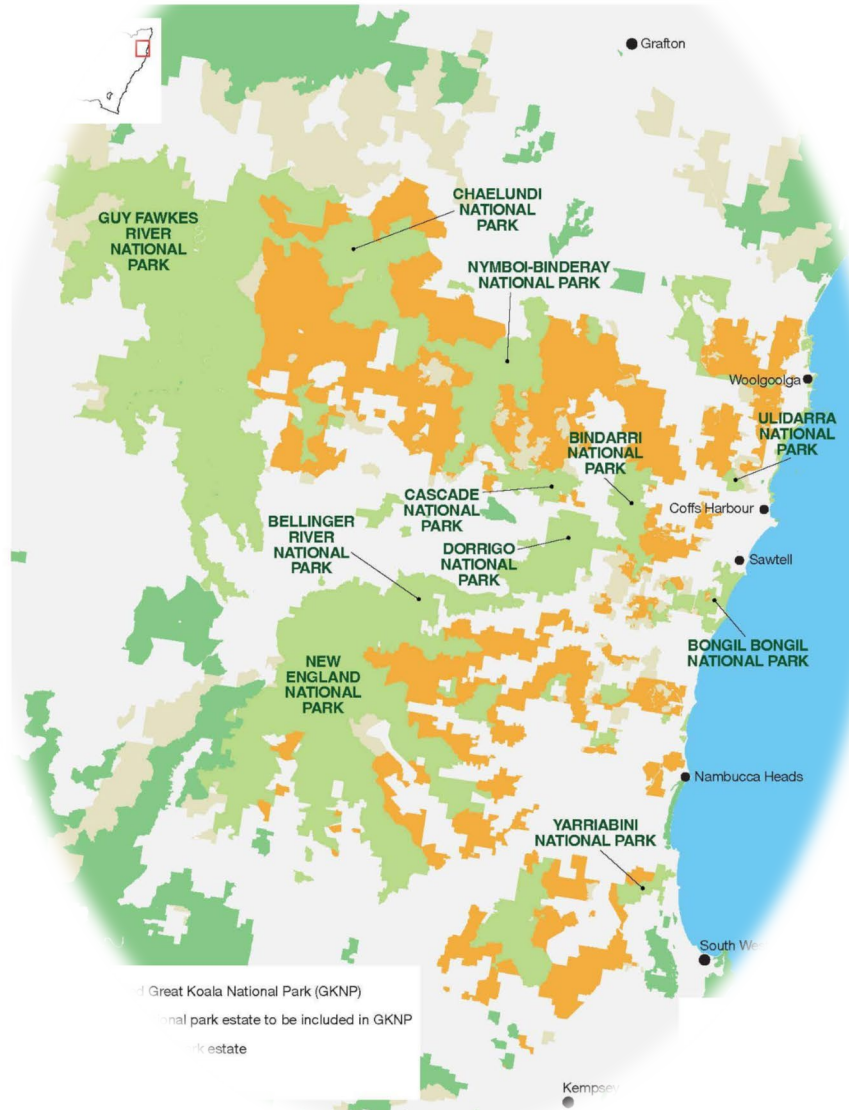
(Source: Biolink, 2013)

In 2016 the NSW DCCEEW embarked on an ambitious project to identify areas supporting regionally significant koala populations across NSW with a view to prioritising koala conservation and guiding conservation investment.

Such areas became known as ARKS, a well-considered acronym which expands into the term 'Area of Regional Koala Significance'.

“An ARKS is a contemporaneous koala metapopulations with demonstrable generational persistence which is spatially and demographically independent and sufficiently large enough in terms of available areas of koala habitat so as to be capable of supporting a minimum aggregated population size of 500 adult koalas.”

Proposed Great Koala National Park



Fifty-one ARKS were identified across NSW; the GKNP in essence effectively captures 3 of these : *Coffs Harbour - North Bellingen, Clouds Creek, and North MacLean – Nambucca.*

Well done!

It is important that we do not become complacent and think the race may be won, when in fact it has only just got started.

Average annual growth rate of Eucalypts = 5 mm year (Ngugi *et al* 2015)

Koala population doubling time = 11.8 – 12.2 years (Phillips 2000)

It will take a 200mm dbh preferred koala food tree such as Grey Gum 20 more years of growth to become palatable to koalas (*i.e.* reach threshold measure of 300mm dbh at and above which preferential utilisation by koalas commences) and thus increase amount of food resource available to recovering populations.

Based on a presumptive occupancy of 20%, it will take the GKNP ~ 20 years to reach optimal levels of occupancy (benchmark occupancy rate = 50% of available habitat), assuming the absence of stochastic impacts such as climate change and associated impacts of fire / drought, including koala food tree palatability.

Koala recovery is hence a long road with many a winding turn...



So what's the next piece in the recovery jigsaw...

Koalas are a landscape species, and their effective recovery from their now endangered status requires a meaningful landscape approach.

North of the Clarence River, the koala genome is known to be different to that in the GKNP (Neaves *et al.* (2016); Lott *et al.* (2022); Lott *et al.* (2024)).

Habitat is primarily located on low nutrient soils derived from Clarence-Morton sandstones. Koala carrying capacity of this landscape is lower, thus making populations more vulnerable to habitat (food tree) loss / stochastic impact such as fire.



Depending on where you look, up to 80% of the koala populations in this area were lost from some areas during the 2019/20 bushfire events (Phillips *et al.*, 2021).

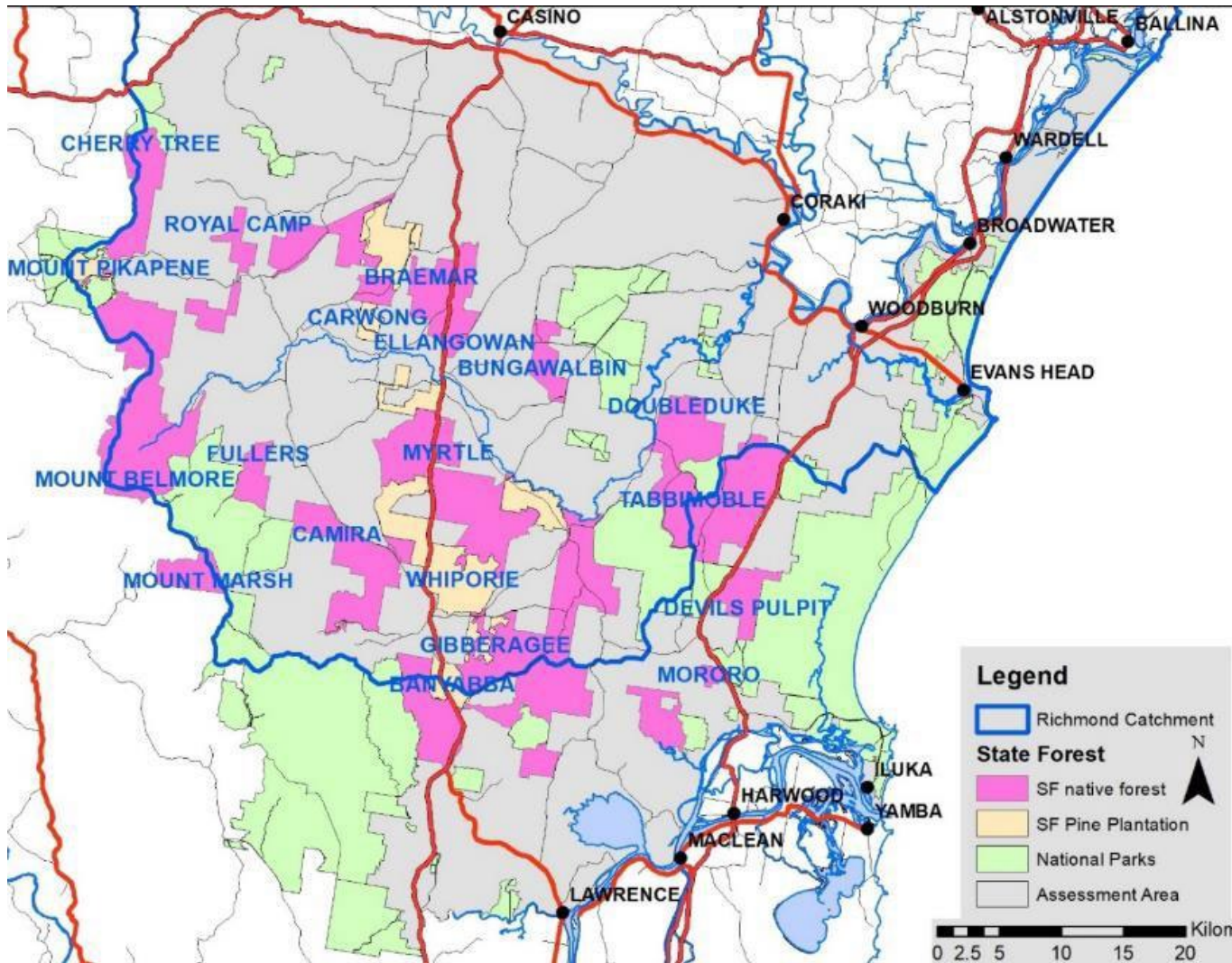
Continued logging of State Forests in such areas, and specifically the removal of preferred koala food tree species such as the red gums, grey gums and tallowwoods, is actively contributing to ongoing population decline in this key koala landscape.

The importance of this population is reflected in the fact that it has been the focus of scientific survey and conservation effort for nearly 30-years.

Surviving populations need help.

It is relevant that the 2016 assessment by DCCEEW independently identified the greater proportion of the area supporting this population as the '*Banyabba Area of Regional Koala Significance*'.

This same area (the Banyabba ARKS) is at the core of what is now being promoted as the Richmond River Koala Parks (RRKP) proposal.



The RRPK proposal incorporates the Banyabba, Mt. Pikapene, Broadwater and North Grafton (part) ARKS.

The RRPK proposal is a valid and significant koala conservation initiative with strong scientific support.

Before it becomes too late, it is now time to give effect in principle to that proposal.



Recovery of koala numbers can only happen when you stop the processes that are driving population decline in the first instance.

Summary

If decision makers continue to support unsustainable logging practices in NSW State forests, and especially those that fall within recognised ARKS, koala populations will continue to decline therein.

Declaration of the GKNP is an important first step in terms of enabling koala recovery to occur, but recovery is a slow process with lots of moving parts; there are no grounds for complacency.

The RRKP proposal is the next logical step in further assisting koala recovery efforts of key ARKS located between the Clarence and Richmond Rivers in northern NSW. To enable a smooth transition, an immediate moratorium on the logging of key koala food tree species in this area would be an important first step.